

Abstract

Voltage regulator with adjustable output impedance

5 The invention relates to a voltage regulator having an output terminal (AK) for the provision of an output voltage and connection of a load, an output capacitor (20) connected to the output terminal and having an equivalent series resistance (ESR), a converter unit (10) having supply voltage
10 terminals for the application of a supply voltage (V_{cc}), an output coupled to the output terminal (AK), a feedback signal input for feeding in a feedback signal (V_{fb}) dependent on the output voltage, a reference signal input for feeding in a reference signal (V_{ref}), and a comparator unit (TA3), which
15 provides a differential signal (I_{ea}) from the reference signal (V_{ref}) and the feedback signal (V_{fb}), in which case the converter unit (10) provides an output current (I_{out}), the mean value of which is proportional to the differential signal (I_{ea}), the proportionality factor between this
20 difference and the output current (I_{out}) being set by means of a control signal at a control input of the converter unit (10) in such a way that it is proportional to the reciprocal of the equivalent series resistance (ESR) of the output capacitor.

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Figure 5